

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-9. (Canceled)

10. (Previously Presented) A driving circuit for driving a plurality of pixels through N number of data lines, the driving circuit comprising:

N number of sampling switches, where N is a natural number;

N number of A/D converters, each of the N A/D converters converting a first analog signal that is supplied through one respective sampling switch of the N sampling switches into a digital signal;

N number of latches, each of the N latches storing said digital signal; and

N number of D/A converters, each of the N D/A converters converting said digital signal held in a corresponding latch of the N latches into a second analog signal to be supplied to said plurality of pixels, through a corresponding data line of the N data lines.

11. (Previously Presented) The driving circuit according to claim 10, the N sampling switch, the N A/D converters, the N latches, and the N D/A converters being disposed on one substrate.

12. (Previously Presented) An electro-optical device comprising:

N number of data lines, where N is a natural number;

M number of scanning lines, where M is a natural number;

a plurality of pixels disposed correspondingly to intersections of the N data lines and the M scanning lines;

N number of sampling switches;

N number of A/D converters, each of the N A/D converters converting a first analog signal that is supplied through one respective sampling switch of the N sampling switches into a digital signal;

N number of latches, each of the N latches storing said digital signal; and

N number of D/A converters, each of the N D/A converters converting said digital signal held in a corresponding latch of the N latches into a second analog signal to be supplied to a corresponding data line of the N data lines.

13. (Previously Presented) An electronic apparatus comprising said electro-optical device according to claim 12 as a display device.

14. (Previously Presented) An electro-optical device, comprising:

N number of data lines, where N is a natural number;

M number of scanning lines, where M is a natural number;

a plurality of pixels disposed correspondingly to intersections of the N data lines and the M scanning lines;

N sampling switches;

N number of A/D converters, each of the N A/D converters converting a first analog signal that is supplied through one respective sampling switch of the N sampling switches into a digital signal;

N number of latches, each of the N latches storing said digital signal outputted by a corresponding A/D converter of the N A/D converters; and

N number of D/A converters, each of the N D/A converters converting said digital signal held in a corresponding latch of the N latches into a second analog signal to be supplied to a corresponding data line of the N data lines,

the N data lines, the M scanning lines, the plurality of pixels, the N sampling switches, the N A/D converters, the N latches, and the D/A converters being disposed on one substrate.

15. (Currently Amended) A driving circuit for driving a plurality of pixels, the driving circuit comprising:

a sampling circuit that samples a first analog signal supplied through one sampling switch and holds a first analog signal to be inputted in one horizontal scanning period;

an A/D conversion circuit that after the sampling circuit samples and holds the first analog signal, converts said first analog signal held in said sampling circuit into a digital signal, once per horizontal scanning period;

a storage device that stores said digital signal; and

a D/A conversion circuit that converts said digital signal, which is stored in said storage device, into a second analog signal to be supplied to said plurality of pixels.

16. (Previously Presented) The driving circuit according to claim 15, said sampling circuit, said A/D conversion circuit, said storage device, and said D/A conversion circuit being disposed on one substrate.

17. (Previously Presented) A driving circuit for driving a plurality of pixels, the driving circuit comprising:

a sampling circuit that samples a first analog signal and holds said first analog signal to be inputted in one horizontal scanning period;

an A/D conversion circuit that converts said first analog signal held in said sampling circuit into a digital signal;

a storage device that stores said digital signal; and

a D/A conversion circuit that converts said digital signal, which is stored in said storage device, into a second analog signal to be supplied to said plurality of pixels,

said A/D conversion circuit converting said first analog signal held in said sampling circuit into said digital signal within a time that is shorter than said one horizontal scanning period, said digital signal being stored in said storage device.

18. (Previously Presented) The driving circuit according to claim 15,
said storage device storing said digital signal obtained from said A/D conversion circuit within a fixed period, and
said D/A conversion circuit converting said digital signal stored in said storage device into said second analog signal to be supplied to the plurality of pixels.

19. (Previously Presented) A driving circuit for driving a plurality of pixels, the driving circuit comprising:

① a sampling circuit that samples a first analog signal and holds said first analog signal to be inputted in one horizontal scanning period;

an A/D conversion circuit that converts said first analog signal held in said sampling circuit into a digital signal;

a storage device that stores said digital signal;

a D/A conversion circuit that converts said digital signal, which is stored in said storage device, into a second analog signal to be supplied to said plurality of pixels;

a path through which said digital signal is supplied from said A/D conversion circuit to said storage device; and

a path through which an external digital signal is supplied from an external circuit to said storage device.

20. (Previously Presented) The driving circuit according to claim 15,

said D/A conversion circuit generating said second analog signal obtained by performing nonlinear conversion of said digital signal.

21. (Previously Presented) The driving circuit according to claim 16, said sampling circuit, said A/D conversion circuit, said storage device, said D/A conversion circuit, and said pixels comprising a plurality of thin film transistors formed on said substrate.

22. (Previously Presented) An electro-optical device comprising said driving circuit according to claim 15 and a plurality of pixels driven by said driving circuit.

23. (Previously Presented) An electronic apparatus comprising said electro-optical device according to claim 22 as a display device.

24. (Previously Presented) A driving circuit for driving a plurality of pixels, the driving circuit comprising:

an A/D conversion circuit that converts a first analog signal supplied through one sampling switch into a digital signal;

a storage device that stores said digital signal; and

a D/A conversion circuit that converts said digital signal, which is stored in said storage device, into a second analog signal to be supplied to said plurality of pixels,

said A/D conversion circuit, said storage device, and said D/A conversion circuit being disposed on one substrate on which the plurality of pixels are disposed.

25. (Previously Presented) An electro-optical device comprising:

an A/D conversion circuit that converts a first analog signal supplied through one sampling switch into a digital signal;

a storage device that stores said digital signal;

a D/A conversion circuit that converts said digital signal, which is stored in said storage device, into a second analog signal; and

a plurality of pixels to which said second analog signal is supplied from said D/A conversion circuit,

said A/D conversion circuit, said storage device, said D/A conversion circuit, and said plurality of pixels being disposed on one substrate.

26. (Previously Presented) An electronic apparatus comprising said electro-optical device according to claim 25 as a display device.

27. (Currently Amended) A driving circuit of an electro-optical device for displaying an image, by driving a plurality of pixels disposed in a matrix in response to an analog image signal, the driving circuit comprising:

a plurality of sampling circuits that sequentially sample and hold the analog image signal inputted in one horizontal scanning period;

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a plurality of A/D converters that after the sampling circuits sample and hold the analog signal convert the analog image signals, which are held in the plurality of sampling circuits, into digital image signals;

a storage device that stores the digital image signals; and

a plurality of D/A converters that converts the digital image signals, which are stored in the storage device, into the analog image signals to be supplied to the plurality of pixels;

wherein the plurality of A/D converters convert the analog image signals into the digital signals once per horizontal scanning period.